

## IN THE CLAIMS

In order most promptly to place the application in a condition for allowance, please cancel claims 1-2, 4, 6-8 without prejudice. These claims will be presented in a subsequent continuation or continuation-in-part application. In addition, claim 3 incorporates the Examiner's comments and is now written in independent form. Please note that a decision feedback equalizer (DFE) element is added to claim 3 to correct the potential problem of inferential claiming. The DFE element does not expand claim 3 beyond the scope of the original claim 3. Thus, it is respectfully submitted that the amended claim 3 is within the bounds that the Examiner indicated are allowable.

This listing of claims will replace all prior versions, and listings, of claims in the application:

### Listing of Claims

1. (Cancelled)
2. (Cancelled)
3. (Currently amended) An adaptive equalizer ~~of claim 1, further~~ for generating an error signal, the adaptive equalizer comprising:
  - a trellis decoder having a decoder input port for accepting a decoder input signal and
  - a decoder output port for providing a decoder output signal;
  - a mapper, ~~and~~ wherein the decoder output signal is mapped and scaled by the mapper to produce a decision feedback equalizer input signal; and before it is
  - ~~provided to the decision feedback equalizer~~
  - a decision feedback equalizer having a decision feedback equalizer input receiving
  - the decision feedback equalizer input signal and a decision feedback equalizer

output providing a decision feedback equalizer output signal, where the decision feedback equalizer output couples operably to the decoder input port; and wherein the error signal is generated by subtracting the decoder input signal from the decoder output signal.

4. (Cancelled)

5. (Original) An adaptive equalizer comprising:

an FIR filter having an FIR filter output;

a trellis decoder having a trellis decoder input coupled to the FIR filter output;

a mapper coupled to the trellis decoder, having a mapper input, a first mapped and scaled output and a second mapped and scaled output, the mapper being coupled to the trellis decoder output; and

a decision feedback equalizer having a DFE input and a DFE output, wherein the DFE input is coupled to the first mapped and scaled output;

wherein an error signal is generated by subtracting the trellis decoder input from the second mapped and scaled output.

6. (Cancelled)

7. (Cancelled)

8. (Cancelled)

#### REMARKS

Claims 1-8 are pending in the application herein. The Examiner stated Claim 5 is allowable. The Examiner stated that Claim 3 is allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. The

Examiner rejected claims 1-2, 4, 6-8. Applicants respectfully traverse each ground of rejection and request reconsideration and further examination of the application. To place application in allowable form, the Applicants respond to each ground for rejection and objection as follows:

**A. Figures 1-7 are amended to comply with MPEP § 608.02(g) requiring “Prior Art” designation.**

The Examiner objected to Figures 1-7 as containing only “old” art. Although not objected to, the Applicants note that the previously submitted drawings contain some informalities.

In conformance with the Examiner’s comments regarding MPEP § 608.02(g), Figures 1-7 are herein amended to include a “Prior Art” legend. Appendix A contains the annotated marked-up drawings of Figures 1-7. Furthermore, the Applicants herewith submit formal drawings of Figures 1-9.

**B. Claim 6 is cancelled to obviate Examiner’s double patenting rejection.**

Claim 6 is cancelled. Therefore, it is respectfully submitted that the Examiner’s double patenting rejection of claim 6 is obviated.

**C. Amended form of Claim 3 is allowable subject matter.**

Applicants would like to thank the Examiner for indicating the allowable subject matter of Claim 3. Claim 3 is amended in the manner suggested by the Examiner. In addition, Claim 3 is written to claim distinctly and uniquely a decision feedback equalizer element to correct any problem of inferential claiming. Please note that a decision feedback equalizer element does not expand Claim 3 beyond the scope of the

original Claim 3. Thus, it is respectfully submitted that Claim 3 is within the bounds that the Examiner indicated are allowable.

Therefore, it is respectfully submitted that Claim 3, as amended, is in an allowable form.

**D. Claim 5 is allowable subject matter.**

Applicants would like to thank the Examiner for indicating the allowable subject matter of Claim 5.

**E. All other claims objected to by Examiner are cancelled without prejudice.**

Claims 1, 2, 4, 7, and 8 are cancelled herein without prejudice to filing these claims in a subsequent related application. It is therefore respectfully submitted that the rejections of claims 1, 2, 4, 7, and 8 are obviated.